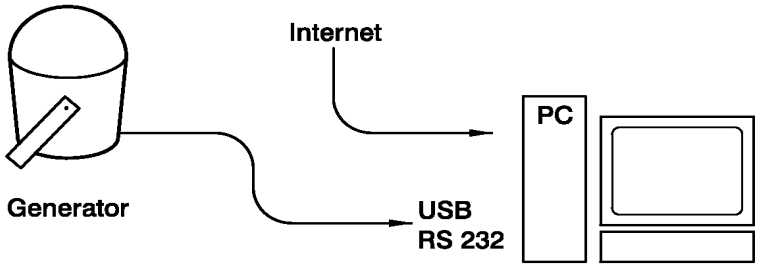


Fig. 1 CONNECTION

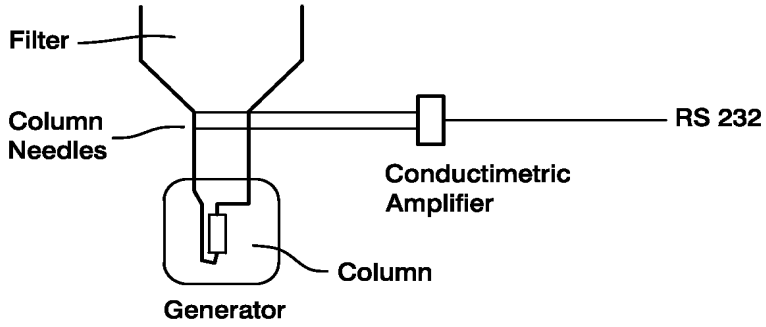


Fig. 2 HIGH FREQUENCY CONDUCTIMETRY

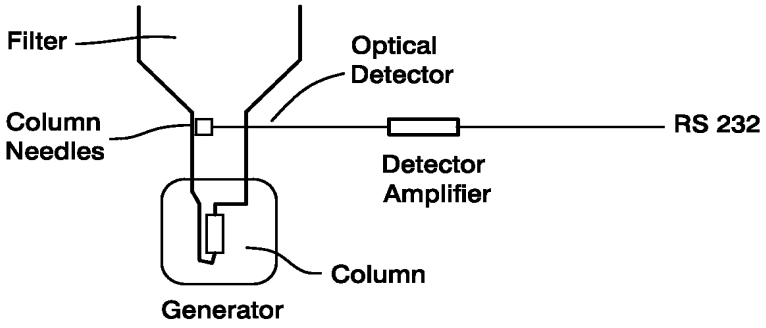


Fig. 3 PHOTOMETRY

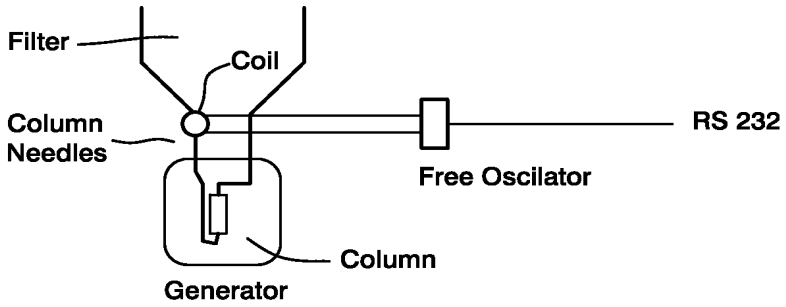


Fig. 4 IMPEDANCEOMETRY

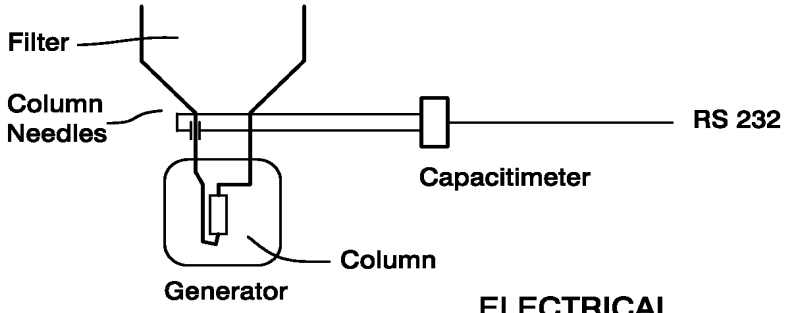


Fig. 5 ELECTRICAL CAPACITOMETRY

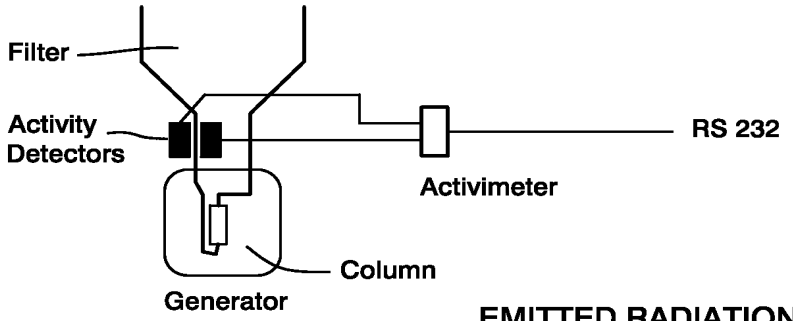


Fig. 6 EMITTED RADIATION DETECTION

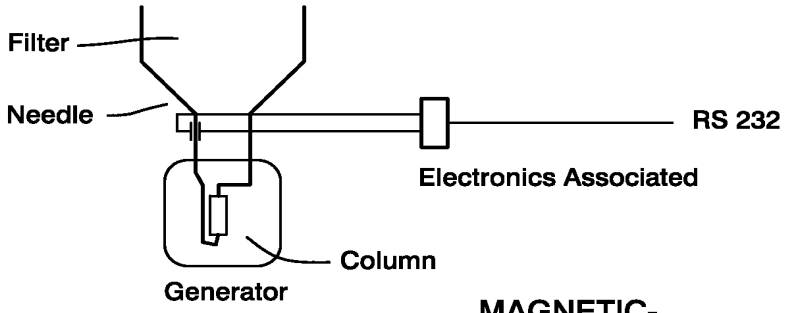
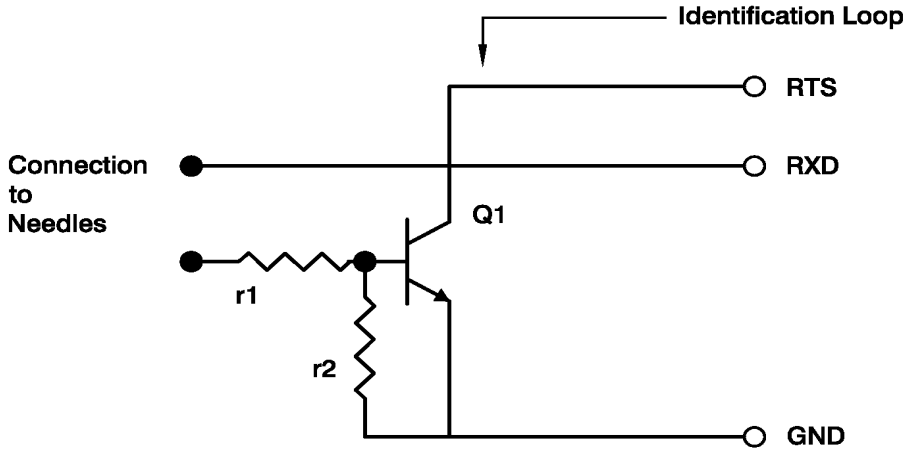


Fig. 7 MAGNETIC-HYDRODYNAMIC

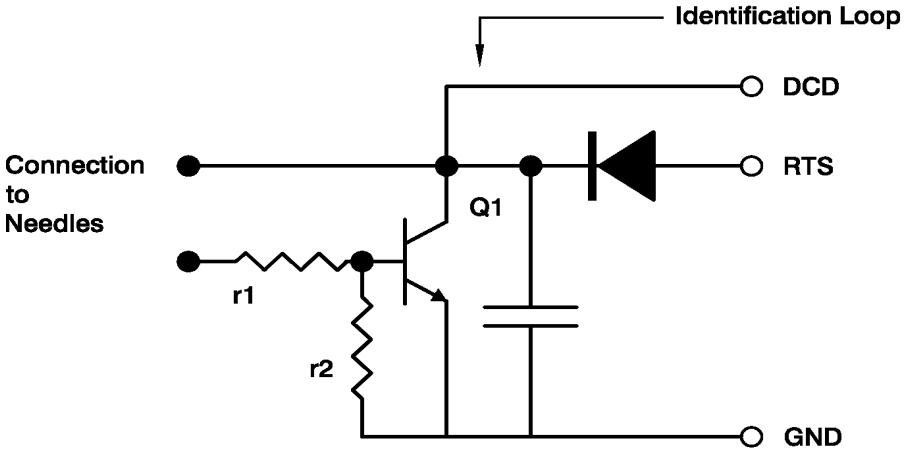
ELECTRONIC CIRCUITS

Port RS 232				Paralel
Name	Function	DB9 nº pin	DB25 nº pin	Nº pin
DCD	In	1	8	11
RXD	In	2	3	12
TXD	Out	3	2	2
DTR	Out	4	20	3
GND	0 volt	5	7	25
DSR	In	6	6	13
RTS	Out	7	4	4
CTS	In	8	5	14
RI	In	9	22	15



Q1 type NPN BC547
R1 100 K
R2 700 K

Fig. 8



Q1 type NPN BC547
R1 100 K
R2 700 K

Fig. 9

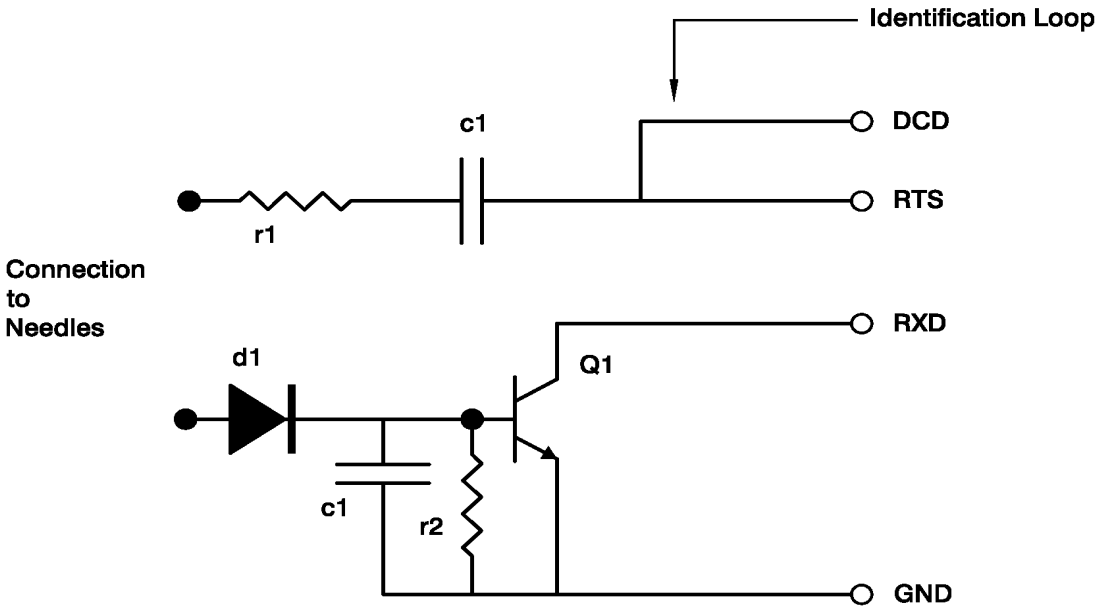

Identification Loop
c1
DCD
RTS
r1
Connection
to
Needles
RXD
d1
Q1
c1
r2
GND

Fig. 10

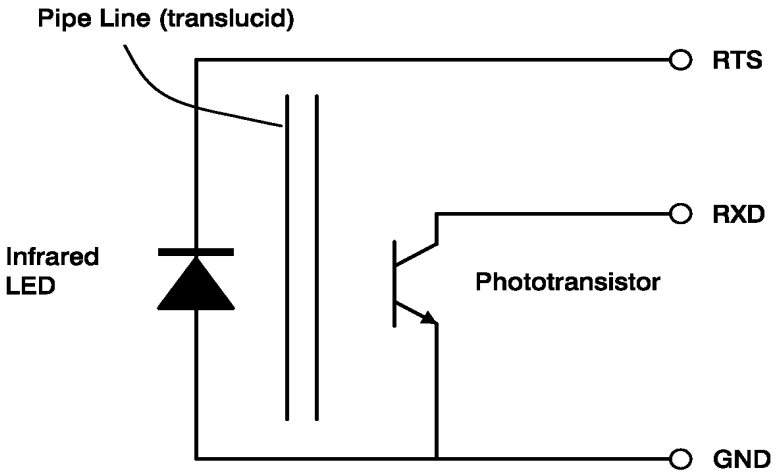

Pipe Line (translucid)
RTS
RXD
Infrared
LED
Phototransistor
GND

Fig. 11

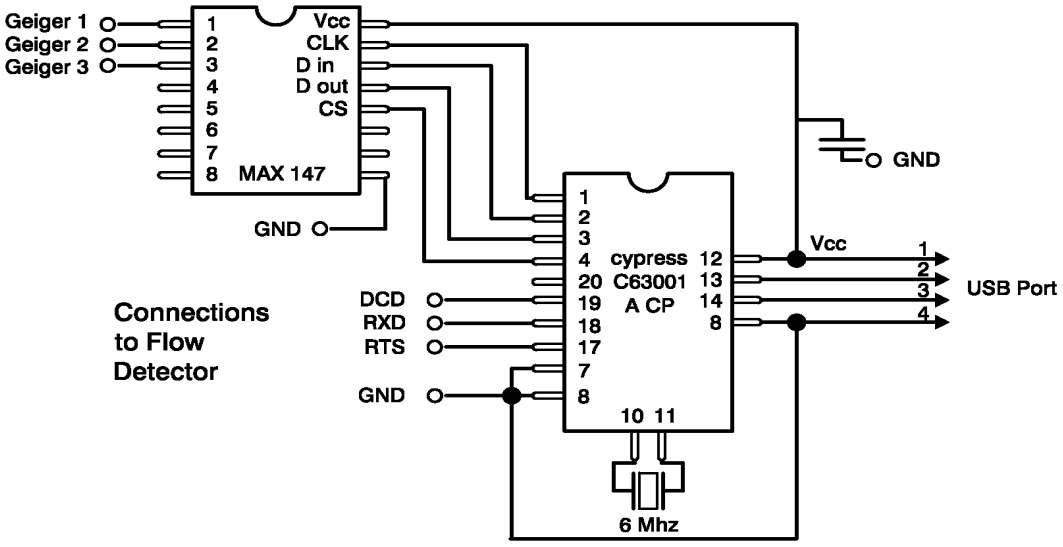


Fig. 12

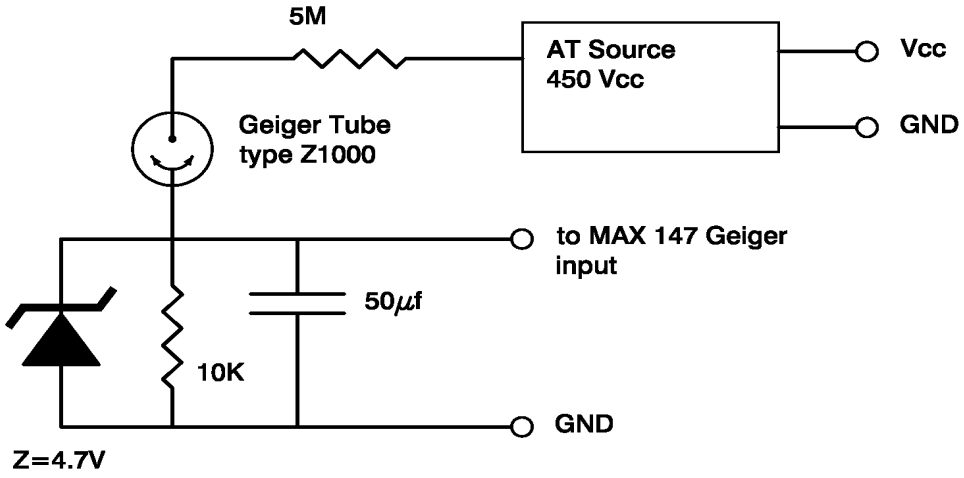


Fig. 13 CIRCUIT 6